

## Introduction

Most of times veterinarians treat their patients with ordinary drugs that are easy to get in common drugstores. However, this is not the most usual when it comes to large animals who live in zoos.

There is the need to formulate the conventional drugs in small animals specifically for large and wild animals, either by difficulty on dosage, appetite, route of administration or acceptance.

## Hypothesis

In their zoos, veterinarians use medicine to treat animals, whether they are commercial products or compounded drugs specifically formulated.

## Objectives

- To make a list of the most relevant zoos.
- To create a contact list of veterinarians.
- To do an attractive, brief and understandable survey.
- To write a cover letter.
- To gather information about compounded drugs used in zoo.
- To create a pharmacopoeia.
- To share the results among participants.

## Targeted zoo centres

This project includes 36 zoos from Spain, Balearic and Canary Islands. The centres has been selected on the basis of their number and diversity of species.



Figure 1: Map of targeted zoo centres (green)

## Survey design

To create this pharmacopoeia it is necessary to obtain first-hand information, consulting the veterinarians from the selected zoo through a survey, which consists on the following steps (Thayer-Hart et al., 2010):

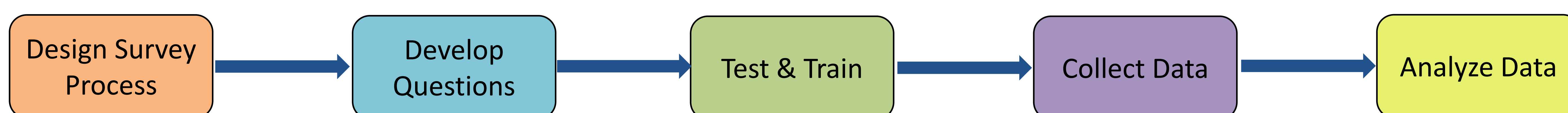


Figure 2: Survey process

## Results

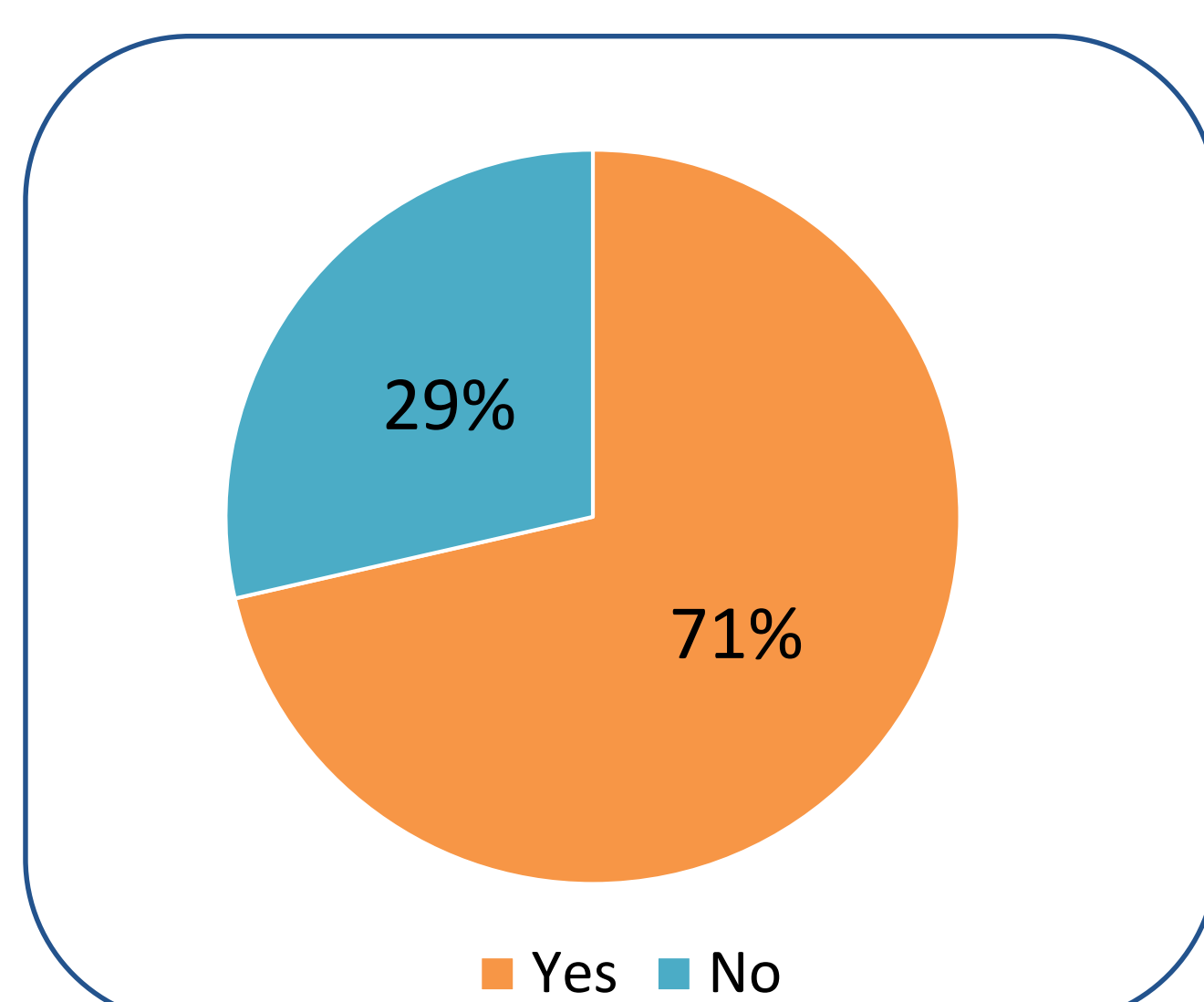


Figure 3: % use of compounded drugs

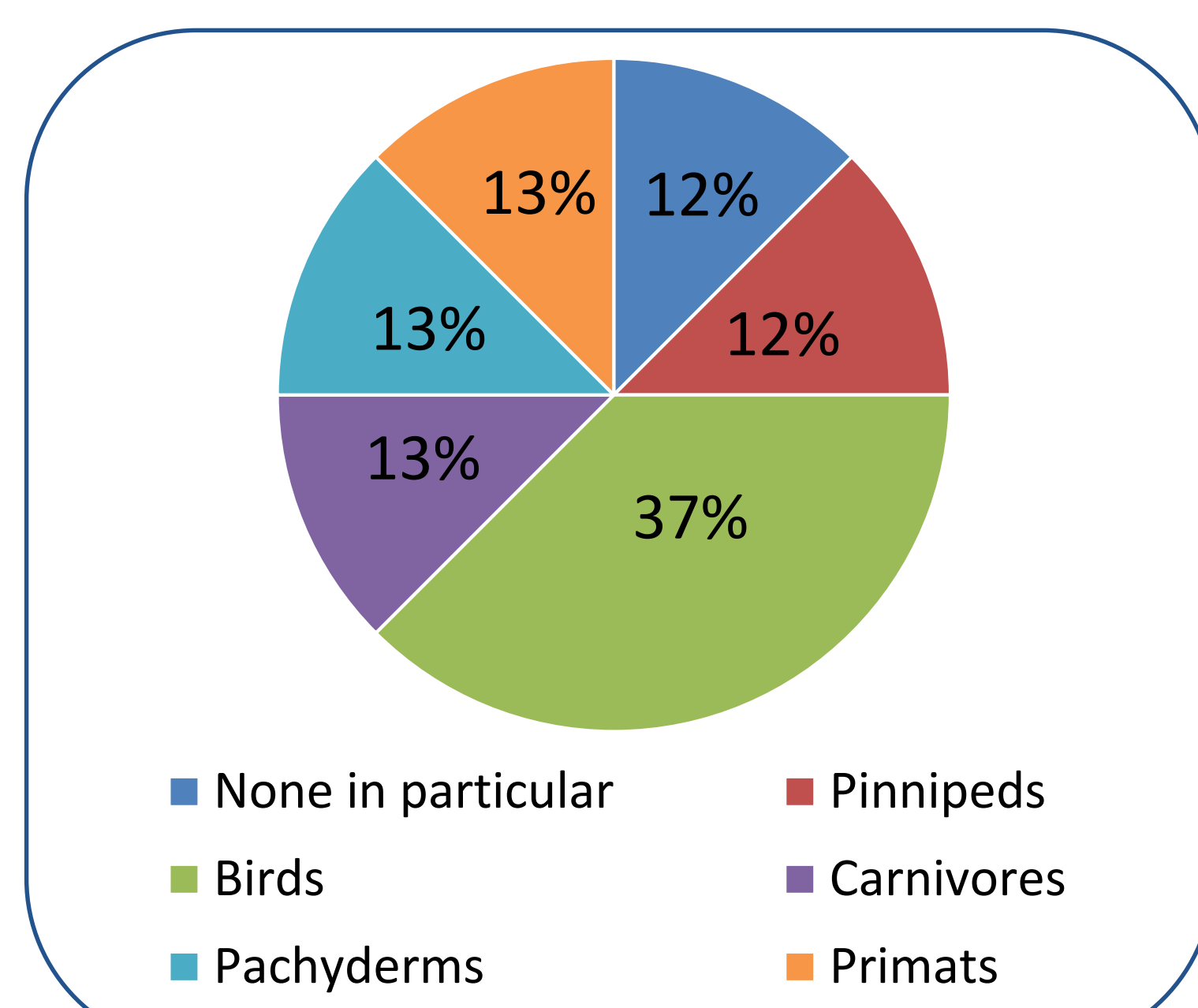


Figure 4: More taxonomic groups treated

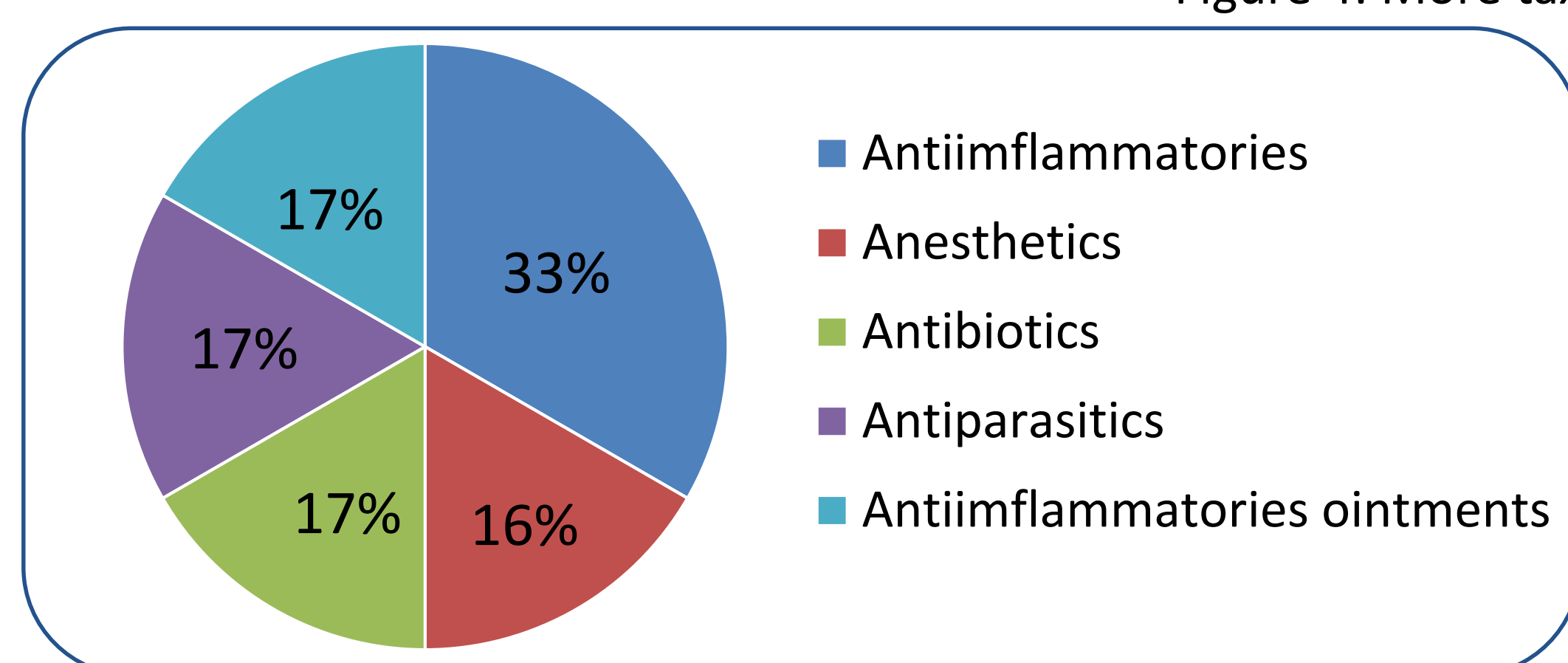


Figure 5: More compounded drugs used

## Conclusions

- Conventional drugs need to be formulated again for animals from zoos because of dosage, appetite, route of administration or acceptance.
- Most zoos (71%) use compounded drugs specifically formulated for their animals, these include 25% of the treatments.
- The most formulated type of drugs are anti-inflammatories.
- The taxonomic groups of animals treated this way are: birds, carnivores, primates, pachyderms and pinnipeds.

## References

Thayer-Hart, N., Dykema, J., Elver, K., Schaeffer, N. C., & Stevenson, J. (2010). Survey Fundamentals. *Office of Quality Improvement*, 1–20